WATER INNOVATION TECHNOLOGIES PROJECT (WIT)

QUARTERLY REPORT

FIRST QUARTER – FISCAL YEAR 2021

OCTOBER - DECEMBER 2020

THIS REPORT WAS PRODUCED FOR REVIEW AND APPROVAL BY THE UNITED STATES AGENCY DEVELOPMENT (USAID). IT WAS PREPARED BY MERCY CORPS.

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THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

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SUBMITTED BY:

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Acronyms and Abbreviations

ACC	Agricultural Credit Corporation
CBO	Community-Based Organization
CDFJ	Center for Defending the Freedom of Journalists
CLA	Collaborating, Learning, and Adapting
CWR	Crop Water Requirements
EMMP	Environmental Mitigation and Monitoring Plan
FY	Fiscal Year
GOJ	Government of Jordan
HCC	Haya Cultural Center
ICBA	International Center for Biosaline Agriculture
INWRDAM	Inter-Islamic Network on Water Resources Development and Management
IWMI	International Water Management Institute
JCB	Jordan Commercial Bank
JCC	Jordan Cooperative Corporation
JMD	Jordan Meteorological Department
JD	Jordanian Dinars
JoPACC	Jordan Payments and Clearing Company
JRF	Jordan River Foundation
LMS	Loan Management System
LOP	Life of Project
MAIS	Mais Irrigation Co.
MC	Mercy Corps
MCM	Million Cubic Meter
MEL	Monitoring, Evaluation, and Learning
MIRRA	Methods for Irrigation and Agriculture

MOA	Ministry of Agriculture
MOE	Ministry of Education
MoSD	Ministry of Social Development
MWI	Ministry of Water and Irrigation
NARC	National Agricultural Research Center
NDICO	National Drip Irrigation Company
RO	Reverse Osmosis
RSS	Royal Scientific Society
RWH	Rain Water Harvest
SMS	Short Message Service
UNITEX	United Plastic Containers
USAID	United States Agency for International Development
USD	United States Dollars
WIT	Water Innovation Technologies
WSD	Water-Saving Devices
WST	Water-Saving Technologies
YC	Youth Centers

Project Overview

Al-Buwadia Retention Structure in Ramtha.

The Water Innovation Technologies (WIT) Project is a five-year initiative funded by the United States Agency for International Development (USAID) and implemented by Mercy Corps (MC). The objective of the project is to increase water conservation in Jordan by focusing on water efficiency in the agricultural sector and at the community, and household levels.

The Project's theory of change states that "if barriers to the adoption of water-saving technologies are systematically broken down at multiple levels, with different groups of water users and market actors through enhancing knowledge, forming partnerships and providing advisory services, in addition to improving access to finance and strengthening institutions that support water-saving, then adoption of water-saving technologies by farmers, households, and communities will increase leading to the sustainable management of water and natural resources".

The project goal is to save 18.5 MCM of water by addressing market system constraints in the adoption of innovative water-saving technologies in the agriculture and household sectors. WIT works to facilitate the uptake of advisory and financing services and uses an integrated strategy with a social and behavioral change approach to help a variety of water sector market actors overcome key barriers and constraints at individual and institutional levels. For the agriculture and household sectors, lack of knowledge, information, and access to appropriate financing services are key constraints in the adoption of water-saving technologies. These barriers were identified at the beginning of the project and have been updated on a regular basis.

Through private companies, WIT promotes the sustainable and scaled adoption of water-saving practices and technologies in agriculture, households, and key market actors who work directly with farmers, and communities in the North of Jordan. WIT works in collaboration with the Government of Jordan (GOJ) through the Ministry of Water and Irrigation, Jordan Valley Authority and Water Authority of Jordan, and the Ministry of Social Development, along with other partners including the International Center for Biosaline Agriculture (ICBA) in the provision of technical advisory services to farmers and suppliers, the International Water Management Institute (IWMI) in the implementation of the learning agenda and monitoring of water-savings for the project, the Jordan River Foundation (JRF) in increasing the adoption of water-saving technologies by households and communities and

the Royal Scientific Society (RSS) bringing first-hand information about how communities in Jordan are innovating and adapting water-saving technologies.

By using a set of pre-identified market barriers to frame program objectives, WIT has designed activities that bring improved and affordable water-saving practices and technologies into use among farmers, households, and communities, which also enhance the functioning of the market for those technologies. Project activities aim to 1) Inform farmers and households about the financial, environmental, and access-related benefits of water-saving technologies, building market demand for related goods and services; and 2) Build the capacity of market actors to design, distribute, market, and finance water-saving technologies, improving the supply and affordability of related goods and services.

Executive Summary

From October to December 2020, WIT continued to support market actors in increasing adoption of water-saving technologies by farmers and households (HH) and developing irrigation management and water-saving technologies information. As a result of WIT efforts, 949,078 m^3 of water were saved (839,259 m^3 from agriculture-led efforts and 109,819 m^3 from 13,958 adoptions of household-related interventions). However, HH adoptions reported this quarter are not reflected in the water-saving data since the rainwater harvesting adoptions were not within the rainy season and some results of these adoptions were reported in FY20 annual report.

Within the agriculture component, WIT has worked to address market constraints among supply and demand stakeholders for the adoption of water-saving and irrigation technologies. While progress has been made with partner irrigation suppliers in promoting a diverse array of technologies and increasing supplier staffs' technical knowledge, irrigation equipment suppliers do not see the value within and thus do not provide quality pre- and post-sale services that could both spur farmer demand for irrigation technologies. Alongside this, farmers remain largely unaware of the cost-effectiveness of maximizing their irrigation systems'. For FY21, WIT revamped its approach to support market actors through 1) the provision of pre-and post-sale advisory services through public and private entities, 2) building supplier-customer relationships, and 3) training farmers to better operate and manage their irrigation systems. As a result, WIT launched the result-based service package activity and successfully signed agreements with four main irrigation suppliers including the National Drip Irrigation Company, MAIS, Universal and Adritec, to scale up improved irrigation-related services.

Additionally, during the reporting period, WIT facilitated the following efforts:

- The Arab Drip Irrigation Co (ADRITEC) promoted its T-tape drip irrigation system to optimize seven farms covering 1.55 hectares (15.5 dunums).
- Tadsheen optimized two farms (one in Mafraq and another one in Azraq) covering 65 hectares (650 dunum) and launched their marketing activities in the highlands.

- INWRDAM made their "WISE" smart application ready to use to help farmers schedule their irrigation events; and
- NDICO, optimized four new farms in Mafraq covering 5.4 hectares (54 dunums).

To address the knowledge related-barriers, WIT has adopted a multi-pronged approach to increase farmers' access to relevant irrigation-related advice from a variety of different market actors. For example, during this quarter, WIT developed factsheets about water requirements for crops in Mafraq and Azraq in combination with, three educational videos for farmers which covered technical topics such as irrigation network design, benefits of using low-flow emitters associated with proper filtration systems, irrigation system management and scheduling. As part of the dissemination efforts to the above-mentioned products, WIT is closely working with NARC in the digitation of agricultural information by developing a smart application that will cover agricultural and irrigation related information.

Finally, WIT continues to work with the Agriculture Credit Corporation (ACC) in the development of a loan product to support farmers´ awareness and adoption of water-saving technologies. During the reporting period a total of 55 loans were distributed by ACC for a total amount of $1,316,155 USD (931,810 JD). Simultaneously, WIT continues to work closely with the Jordan Commercial Bank to complete the piloting phase and remains in close monitoring of disbursed loans to ensure that the loans have been utilized for the adoption of water-saving technologies.

Within the Household Component, WIT continued providing technical support to three water-saving suppliers to expand their sales networks, ensure the local availability/accessibility of their products, and enhance their communication materials which will result in an increase in their sales. As a result of these efforts, the companies' main accomplishments for the reporting quarter include:

- Al Aman facilitated the adoption of 909 water-saving devices (WSDs) ultimately leading to 3,869 m^3 of water being saved.
- Sollvilion completed their agreement and successfully sold 46 systems. 23 of the 46 systems were installed (17 sold and six from demo sites), accounting for 2,900 m^3 for the reporting period; and
- Unitex installed five rainwater harvesting systems.

Additionally, Petra Green Company for RO filters, have continued to sell their technologies through WITs' revolving loan activity. During the reporting period they sold 60 filters accounting for quarterly water savings of 4,691 m^3.

As part of the construction initiatives, WIT has resumed its activities in Ramtha and Deir Al Kahef Dams. The final handover is expected at the beginning of Q2 FY21 and expected yearly water savings from these two projects will total 21,975.31 m^3.

During this quarter WIT completed the installation of water-saving devices in five schools in Ajloun and Jerash, this intervention included the construction of rainwater harvest (RWH)

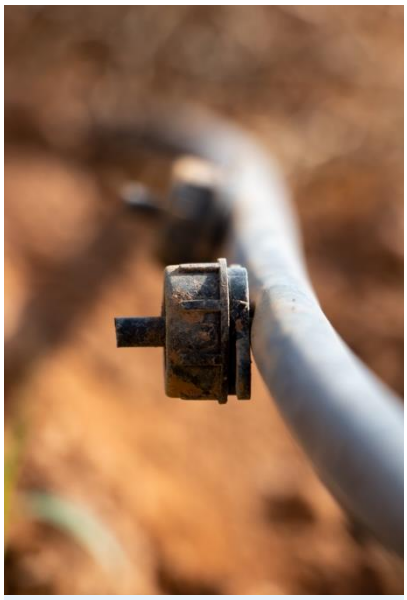
system, greywater systems, connected with the drip irrigation system and WSDs. The handover to the Ministry of Education is expected to occur in January 2021.

WIT completed an in-depth technical assessment for 25 new schools in Ajloun, Mafraq, Jerash, Azraq and Amman to understand the water situation in these schools and the kind of intervention needed. A concept with all required details was submitted and the installation of water-saving devices will occur through FY21.

From the 20,656 adoptions of practices and technologies recorded in FY20 the total amount of water saved from these adoptions is 95,479 m^3 during the reporting quarter. Up to December 2020, household related interventions managed to claim 618,959 m^3 of water saved and 26,949 adoption of water-saving practices and technologies.

Progress on Activity Implementation

Outcome 1: Adoption of water-saving technologies by farmers increased



PC Online dripper installed in a farm at Mafraq.

As critical actors in the irrigation technology market, irrigation equipment suppliers represent a key leverage point for facilitating change in water-use efficiency in the agricultural sector. In previous years, WIT increased the skills and knowledge of market actors such as agriculture suppliers and government actors (NARC, the Ministry of Agriculture (MoA) and MWI representatives) by conducting intensive training, awareness sessions, and workshops detailing a variety of topics including communication, marketing, and technical skills. As a result, the staff of these suppliers and institutions showed improved knowledge and skills, however, there remains a gap in increased skills and knowledge translating into improved support and exchanges with farmers. During October-December FY21, WIT revamped its efforts through the development and launch of a results-based service package of interventions to build suppliers' capacities. The results-based service package aims at improving irrigation services over the long term versus simply providing equipment on request, which is the current practice of suppliers. This resulted in the signature of four new subawards with Jordan´s largest irrigation companies. (NDICO, UNIVERSAL, MAIS and ADRITEC). During the reporting period, engaged market actors optimized 15.75 hectares (157.5 dunums) and an additional 839,259 m^3 were saved. Since the beginning of field-related interventions, combined efforts from suppliers, early adopters, and farmers have led to the optimization of 1,177.8 hectares (11,778 dunums) and 10,866,538 m^3 of water saved.

Grape farm in Mafraq equipped with online PC drippers.

Promotion of water-saving technologies and irrigation services for farmers

Private-sector advisory and after-sale services

WIT has observed that suppliers either lack proper pre-and post-sale services or are not aware of its importance to their sales, their reputation and customers' loyalty. Lack of human resources and the general economic situation are the main two factors preventing suppliers to introduce and provide these services. In an effort to help suppliers overcome these challenges, WIT recently introduced a results-based service package. The package is results-based in that suppliers will receive partial reimbursement for every cubic meter of water saved. The service promotion package components include:

1. Irrigation System Design Software and Training in which the software is able to design an irrigation system in reduced time while taking the field topography and existing network into consideration.
2. Technical Staff to Conduct Field Sales and Servicing.
3. Informational and Awareness Material Support.
4. Marketing Support Budget; and
5. Water-Saving Incentive.

IRRICAD Program training for Agriculture suppliers.

During the reporting period, WIT successfully signed agreements with four irrigation companies: Mais Irrigation Co, National Drip Irrigation Co (NDICO), Arab Drip Irrigation Technology Co (ADRITEC) and Universal for Industry of Drip Irrigation Pipes (Universal) while three additional companies (Al Jabaly Agricultural Group, Karamah Drip Irrigation Est., and Marwa Irrigation Co) are still on the pipeline. A first step after the signature of the agreements is the provision of an irrigation system design software and training to suppliers. During the reporting period WIT provided suppliers with a third-party software package including the software application and in-person training on its usage. WIT chose the IrriCAD software, as it is one of the best programs on efficient irrigation design. The software was introduced to representatives from four suppliers (NDICO, MAIS, Universal, and ADRITEC), in addition to representatives from the Inter-Islamic Network on Water Resources (INWRDAM) and Methods for Irrigation and Agriculture (MIRRA). Each institution received a copy of the software. The software training was held from December 20th to 28th 2020, through a combination of remote and direct training sessions. A total of ten attendees (six men and four women) participated in the workshop. WIT believes that the provision of these training sessions and familiarity of the IrriCAD software will help suppliers to quickly provide custom irrigation system design recommendations to farmers who are installing a new system or improving their current system.

As part of the results-based service package, WIT is financing up to 60% of the cost of one or two new field engineers with each supplier for a limited duration. During the reporting period, Universal hired one engineer and is considering hiring a second one. NDICO and MAIS are still in the process of identifying the final candidates. With engaged engineers, suppliers will provide irrigation system designs and provide after sales support to farmers which will translate into an increased presence of suppliers at the farm level and farmers receiving direct, constant and consistent irrigation advice.

Agriculture fact sheet for grapes farmers.

Furthermore, to increase the scale, effectiveness and creativity of suppliers marketing activities, WIT contracted a marketing consultancy firm to co-develop marketing activity plans with each supplier. Activities proposed in the different plans ranges from social media-based promotions to setting up rural sales points. As part of this, WIT has been developing several informational materials such as factsheets, brochures and videos, in addition to the procurement of irrigation-related toolkits. The provision of these will:

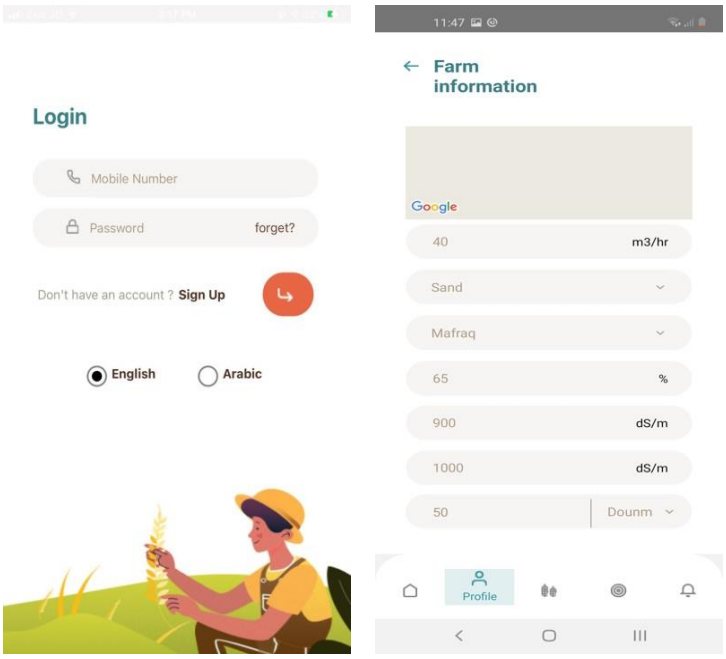
- Introduce crop water requirements from dominant crops in the highlands, and give farmers estimates of crop water requirements and reducing over-irrigation.
- introduce the economic benefits of adopting optimized irrigation systems with proper management practices; and
- introduce fertigation concepts and the linkage between efficient irrigation and efficient fertigation.

These factsheets will play an essential role in helping suppliers to promote water-saving technologies and in convincing farmers to adopt these technologies.

Private-sector technology promotion activities

In addition to the result-based package, WIT supports other activities to save water. INWRDAM has finalized the development of a smart application that provides farmers with irrigation-related information by considering weather parameters and farm information. The application runs in both iOS and Android systems. To receive customized farm-specific irrigation information, each farmer will create their own account on the application and include their farm specifics such as soil, crop, technology, etc. INWRDAM is piloting the application with twenty farms. INWRDAM in collaboration with NDICO has finalized the optimization of two farms, one in Mafraq and one in Azraq covering 16 dunums of stone fruits and 11 dunums of olives. INWRDAM will later hold behavioral change workshops to promote the application and importance of using precise irrigation events as well as to train farmers on how to use the application.

Furthermore, INW RDAM led in building the capacities of three interns, two females and one male. They gained knowledge and skills in irrigation systems, and agricultural practices. Hard skills the interns gained included calculating crop water requirements (CWR) using climatic data alongside soft skills including communicating with farmers.



INWRDAM WISE application interface.

Additionally, WIT supported the automation of two farms (one in Azraq and one in Mafraq), a combined area of 65 hectares (650 dunums), with irrigation systems through Tadsheen Trading Establishment. Tadsheen conducted site visits to collect farm information as well as take measurements and readings for the current network and irrigation consumption data. Afterwards, Tadsheen initiated irrigation network design, conducted water audits and installed the farm equipment requirements. Tadsheen outcomes confirmed the project's assessments which state that farmers consume more water than that of the CWR. Tadsheen will gradually reduce the water consumption in both farms by 10%. To ensure proper operation of the automation system, Tadsheen will monitor the system daily through the web-based cloud system software and through weekly and monthly follow up with the farmers. These two farms will be used as a demonstration site for Tadsheen to promote the automation technologies on:

- Emphasizing the importance of precise irrigation amount as a result of the automation system, which will reflect on the reduction of water and fertilizer losses as well as the crop production.
- easing the monitoring of the irrigation system anywhere with internet access and shutting the system down if there is any issue; and
- reducing the impact of irrigation labor and the level of efforts needed to complete the irrigation events.

"The automation system was successfully installed, we easily reduced 10-15% of the watering schedule with the system and the operator in my farm is giving a lot of positive feedback about the automation as it made the watering process much easier and more controllable, I am very pleased with the automation and Tadsheen's good work in installation, irrigations scheduling, plan drawings, after sale service, trainings, periodic visits

and follow up and on the phone. Now I can monitor the watering process anytime in and out of the farm as I look forward to using the full potential of the system in the future.

As part of our role in broadcasting the good experience of using smart irrigation; during the olive season my farm was opened to all farmers as we have mill for olives and we receive a lot of Azraq farmers we conducted an overview on the system for the farmers and Tadsheen explains to several farmers of what have been installed and the benefits of using it and to make the idea more familiar to the region farmers". Automation farmer testimonial-Tadsheen.

Furthermore, NDICO continued its promotional activities of optimizing a small plot in the highlands in which farmers will observe the optimization benefits. This resulted in the optimization of four farms in Mafraq with a total of 5.4 hectares (54 dunums). ADRITEC continues to promote its T-tape drip irrigation system by implementing (20-30) small-sized demonstration sites of various crops in different regions. Additionally, ADRITEC optimized seven farms covering 1.55 hectares (15.5 dunums) and will shortly hire a consultant to evaluate the impact of the installed system and promote this technology through farm field days.
Finally, Arzaq Company for Manufacturing and Marketing Greenhouses has approached WIT with an opportunity to cover agricultural plots with shade nets; however, no final agreement has yet been reached yet.

Public-sector farmer information systems

To empower the governmental public sector's capabilities in providing irrigation and agricultural information to farmers, WIT is supporting the National Agricultural Research Center (NARC) through two main pillars: 1) Collecting data and information from weather stations and sensory systems installed in the project targeted areas using data on the field of agriculture and irrigation; 2) cooperating and collaborating with INWRDAM to develop a smartphone application that will ease the input of technical information.

As part of this cooperation effort, WITs partner, the International Center for Biosaline Agriculture (ICBA) conducted a quick assessment (See Annex 1) to verify the installation locations of the weather stations. The assessment showed that six new stations should be installed in NARC research centers, or other governmental entities in the following areas:

- Al Hussain stations (NARC HQ).
- Maro Station.
- Ramtha Station.
- Khanasri Station.
- Al Mushaqqar station.
- Eastern side of Mafraq.

Additionally, the three already installed stations will be moved to a more accessible location on the following areas:

- Al Dghelah- Northern Azraq.
- Um Al Jamal.
- Sabha.

The collected raw weather data from these stations will be processed to obtain agricultural information. Additionally, three sensory systems will be installed in Ramtha, Mushaqqar and Khaldeyyeh. NARC will work closely with ICBA to adequately calibrate and operate these systems which will be used to validate CWR numbers and compare them with CWR collected from climatic data and remote sensing. Finally, to facilitate the conjunction of information from different entities, WIT is facilitating collaboration efforts between NARC and INWRDAM to develop a different and more advanced smart application. The smart application will include irrigation information (extreme weather condition, irrigation event duration and amount) from six newly installed stations as well as agricultural information (insects, plant diseases, etc.).

Facilitate irrigation-specific financial solutions to encourage farmers to adopt water-saving irrigation technologies

The project continued working with different market actors to overcome farmers affordability constraints and facilitate proper financial solutions that support farmers and the agricultural sector in adopting water saving technologies.

Financial Trainings

Following the financial literacy training which took place in July 2020 and based on the feedback collected by the farmers, WIT decided to proceed with a second batch of financial training for farmers covering the following topics:

- Cash Flow Management.
- Risk Management.
- Farm Management.
- Financial Management and Pricing.

The aim of this activity is to equip the farmers with the necessary financial knowledge and to support farmers in making financial decisions to better manage their farms without adding to their liabilities.

Agriculture Credit Corporation (ACC)

The project continued it its strategic collaboration with ACC to support the adoption of water saving technologies and having a loan product that meets the financial needs of the farmers to help them adopt water saving technologies. During the reporting period a total of 55 loans have been distributed by ACC for a total amount of $1,316,155 USD (931,810 JD).

In addition, WIT completed the second round of loans verification for ACC for an indicative sample of 62 farmers for the June-September 2020 period. Farmers were asked on the usage of water efficient irrigation technologies in their farms. 74% of the farmers responded that they utilize drip irrigation systems. From this batch of loans there was only one farmer who took the loan to purchase plastic covers instead of water-saving irrigation technologies. It's worth mentioning that ACCs' portfolio targets small farmers with 62% of the indicative sample having taken small loans that varied from 10,000 JOD to 50,000 JOD. The majority of the interviewed farmers have used between 10%–25% of the loan amount to purchase water-saving technologies. Since only 3% of the indicative sample have taken larger loans, other financial institutions still have the opportunity to penetrate the agricultural sector in Jordan.

Jordan Commercial Bank

During December 2020, WIT completed the piloting phase of the product development activity for Jordan Commercial Bank, with one loan for a total amount of $7,062 USD (5,000 JOD) in Al Ma`adi area. WIT and Al-Bayan have been working to train pilot branches of Jordan Commercial Bank on the new product to manage and capture feedback, determine the gaps to make the necessary adjustments and enhance the design of the product. The information was captured through monitoring and evaluation processes described below:

- Measuring the performance of the designed loan product.
- ensuring that the loans were taken for the adoption of water-saving irrigation technologies; and
- assessing the effectiveness of the purchased water irrigation technologies which will lead to calculating water saved.

The piloting phase identified the challenges of short demand for water–saving irrigation technologies and difficulties in capturing information from the bank or from the farmers. Nonetheless the project and Al-Bayan were able to identify opportunities which included having an alternative for the requested documents, such as the official registration letter from farmers, as well as working on promotional material to raise awareness about the benefits of the water-saving irrigation technologies.

Miscellaneous

As a quality assurance arm and to overcome the previously faced challenges, WIT has partnered with MIIRRA to evaluate installed irrigation systems and play a vital role in building the skills and knowledge of newly graduated agricultural engineers. During the reporting period, MIRRA was introduced to WIT-suppliers and farms in Mafraq and Azraq. Based on these visits, MIRRA developed a checklist to evaluate irrigation systems.

With regard to the apprenticeship program, MIRRA developed a selection criterion and scoring sheet based to train three new graduates. The training modules started in October and will continue for six months. MIRRA finalized modules one through four, covering the basic concepts of hydraulics and agronomy, irrigation system components, irrigation system performance and irrigation system design.

Finally, WIT, in collaboration with ICBA purchased field-related supplies which will be utilized by NARC to assess the impact of using water-saving technologies of the crop quality (sugar content, and fruit hardness).

Outcome 2: Adoption of Water-Saving Technologies by households and communities increased

Although industry and agriculture represent the bulk of water demand, the percentage for domestic use continues to increase, particularly in Jordan, which is the second-most water scarce country in the world. Water is usually available once a week in urban areas and even less in rural areas with reduced frequency during the summer. For the past few years, WIT has been partnering with suppliers and communities to support immediate and sustainable solutions in increasing access to water and will continue these efforts during FY21.

Awareness of water-saving technologies for households and institutions

Since its inception, WIT has been in an ongoing search for water-saving suppliers with technologies available to the Jordanian market that can be widely adopted among households.

Suppliers

As part of WIT's efforts to activate the water-saving technology sector in Jordan, it has partnered with suppliers to expand their distribution networks and increase their sales. During the reporting period, WIT-supported companies achieved different results through the implementation of diverse activities, as follows:

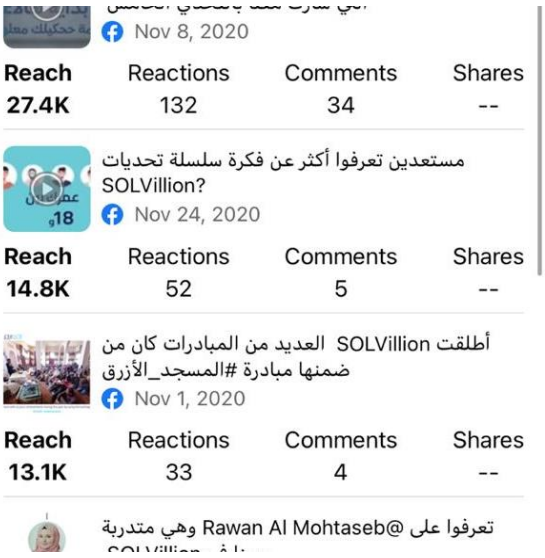
- **Solvillion**, a company targeting reuse distribution systems towards shifting household and community perceptions of greywater reuse, installed six greywater systems in five mosques (Irbid, Jerash, Ajloun, Amman) and one school (Raya bint Al Husein in Mafraq). Solvillion exceeded its target by selling 40 systems that will later be installed in schools, universities, mosques and households. By the end of this quarter, 17 of these systems were installed and the remaining 23 will be installed through the rest of FY21. Water saved from these installed 17 systems accounts for 2,099 m³ during the reporting period.

Installed greywater system.

Solvillion technologies presentation to religious leaders.

To ensure buy-in of the imams and community leaders regarding the system, Solvillion conducted pre- and post-installation sessions in each location introducing the greywater systems, focusing on its functionality and benefits. Due to COVID-19 causing movement restriction among governorates, Solvillion shifted its outreach efforts, initially planned in Mafraq, Irbid, Jerash, and Ajloun, to Amman; the efforts were also shifted from face-to-face interactions, to online marketing products. Solvillion launched four challenges for students and fresh graduates to spark conversation and acceptance of greywater.

The challenge was meant to further Solvillion's objectives in increasing the awareness among communities regarding Jordan's water situation, promoting the benefits of water reuse, and encourage the adoption of greywater reuse systems, A total of 90 students participated in the challenges, 53% of which being female and 47% being male, and 12 winners received an advance training on the greywater system and an offer to become sales agents for Solvillion. One of the



Solvillion's posts on social media.

winners wrote an innovative promotional song which was published on Solvillion´s Facebook page, which has sparked people's attention towards water conservation.

Al-Aman Stand in one retailer shop.

- **Al-Aman:** A water-saving devices distribution company, expanded its market network by signing fifteen agreements with new retailers across Amman and the North of Jordan. Al-Aman supplied retailers with display stands with aerators, shower heads and toilet bags, brochures and illustrative models to assist retailers in promoting and explaining the impact of installing WSDs products directly. In this short period, 73 devices have been sold accounting for 786.07 m³ of water saved.

WIT's support to Al-Aman included the design and implementation of promotional campaigns highlighting WSD and their potential to save up to 35% of the water available in the house. Examples of of these outreach efforts are the promotions among City Mall/Carrefour and Istiklal Mall/C-Town where 800 packages of WSDs were distributed; the distribution of these technologies has accounted for 2,409 m³. Under the social media campaign, two videos were developed to spark people's thinking about the available solutions to increase water consumption efficiency. Both videos have been widely distributed since early October reaching 122.5k people combined and are expected to trigger adoptions of WSD. Finally, in December 2020, Al-Aman completed the installation of 36 WSDs and saving toilets in two institutions (Al-Khawarezmi College and Dar Al-Dawa) as demonstration sites in Amman.

Al Aman WSD display in City Mall.

- **United Plastic Containers (UNITEX):** A manufacturer of plastic products offering plastic tanks for rainwater harvesting systems (RWHs) has completed the installation of rainwater harvesting systems (ten Plastic tanks of 10, 20 and 30 m³) in household and communal locations including schools and mosques. During this quarter the company finalized the installation of five tanks which are expected to account for 260 m³ of water


Installed plastic tanks to collect rainwater.

saved. Furthermore, the company signed agreements to install another five systems in different communal locations to be implemented in FY21 Q2.

- **Community-Based Organizations and Youth Centers:** To address knowledge-related constraints and increase the adoption of water-saving practices and technologies by households, WIT is working to promote public understanding of water conservation issues and solutions. During this quarter WIT developed its training schedule for HH market actros which will cover technical and soft skills. These training sessions began in November 2020 and will continue through September 2021.

Training	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Revolving Loan Feedback workshop	X										
RL-e-Wallet workshop with DINARAK		X									
Dinarak Workshop w/CBOs & YCs			X								
TOT Training -WIT Champions			X								
Water Issues in Jordan - Phase1 & 2			X	X							
Social Media Training 3 Phases				X	X						
Loan Management System Handover								X	X		
ACC Loan Officers Training						X	X				
Awareness Sessions					X	X	X	X	X	X	X

WIT has resumed its efforts with partnered community-based organizations (CBOs) in providing one-on-one coaching and training sessions under the revolving loans activity. During the reporting period, WIT implemented four follow-up meetings with a total of 41 participants (24 women and 17 men) with partnered CBOs regarding the use of digital wallets, loan management system (LMS) and involvement with Dinarak. WIT also facilitated meetings with CBOs about Dinaraks new initiatives focusing on appointing CBOs and youth centers as Dinarak service providers.

Facilitate financial solutions for households to adopt water-saving technologies

As part of WIT's ongoing efforts to facilitate financial solutions for the adoption of water saving technologies, 152 loans were disbursed for a total of $454,069 USD (321,481 JD). From this total, 131 loans have been utilized for the construction of pear-shaped wells for the amount of $444,261 USD (314,537JD), one loan for the installation of plastic tank for $2,118 USD (1,500 JD) and twenty RO filters for $7,846 USD (5,555 JD). Through the implementation of the revolving loan activity, WIT has disbursed a total of 479 loans and five revolved (26% of which have been distributed to women) for a total of $1,374,448 USD (974,484 JD) since the beginning of the project.

After an increase in knowledge of the benefits of using the LMS and digital financial solutions by providing extension services through five WIT champions, WIT decided to hire additional champions to serve CBOs and deliver the necessary training as a part of the Project´s exit strategy. WIT and its implementing partner the Jordan River Foundation (JRF) started to prepare a training session on the following topics.

- Pioneering online payment services and training technologies.
- Facilitation skills and effective feedback delivery mechanisms.
- Field support strategies.
- Practical applications.

Dinarak initiative

As part of supporting private-sector engagement, WIT has supported Dinarak through the activation of e-wallets, facilitating partnerships among Dinarak and CBOs and utilizing CBOs outreach in the communities and water-saving technologies suppliers (Al-Aman and Petra) to create an incentive for clients to activate their wallets with a potential to win WSD. This initiative is funded by GIZ and implemented by Dinarak. WIT will be monitoring the sales increase and the involvement of the CBOs in raising awareness of water saving practices and technologies.

Availability of water-saving technologies to households and communities

Through the agreements signed with different WST suppliers WIT has supported the expansion, availability and accessibility of various WSTs in the targeted markets. After Al-Aman completed their subaward, they expanded their outreach to 15 new distributors/retailers and 30 sales points in the northern governorates and Amman. Each of these sites is equipped with marketing tools to promote the adoption of WSDs. Both Unitex and Solvillion have improved their presence on social media and have installed several demos in different governorates to promote their products.

Upon confirming the need and potential demand on drip irrigation packages among households, WIT conducted a rapid survey to contact CBOs partnering with WIT and four drip irrigation technology suppliers. Unfortunately, two of the suppliers (Karamah and Shera'a) were interested in working mainly with farmers while FaiMai did not present any final proposal. However, Universal is interested in expanding their market to households; they have prepared a small package and are willing to work with CBOs and facilitate preferred prices.

Upon ensuring availability and accessibility of WSD and to motivate the adoption of the different WSTs and practices, WIT and its partner, the Royal Scientific Society (RSS) are working on developing a unified application that includes all the practices and technologies supported by the project. The App will provide the percentage of water saved per practices/technology, and which technology is the best option to be adopted by the household. RSS developed the water-saving equations for the water-saving practices and technologies to be used in the intended mobile applications and is now working on developing the flowchart of the application.

Community-based water projects

To help meet the increasing demand for water, the project has identified, with the support of MWI/JVA, CBOs and community leaders, communal water-saving projects that will lead to increased water availability and reduce the pressure on the public water network and other water supplies.

Name and location of communal project	Description
Deir al Kahef Dam- Deir al Kahef, Mafraq	The rehabilitation work began on September 30th, 2019 but was suspended on November 25th, 2019 due to rainfall and movement restrictions associated with COVID-19. Rehabilitation work resumed in mid-September 2020 and is expected to be completed in January 2021. Afterwards, the project will be handed over to the Deir Al-Kahef Municipality. For FY20 in this project, the water saved was 2671.76 m^3 and the yearly water-savings are expected to be 50,000 m^3.
Buwaidah Dam Ramtha, Irbid	The rehabilitation work began on September 30th, 2019 but was suspended on November 25th, 2019 due to rainfall and movement restrictions associated with COVID-19. Rehabilitation work resumed in mid-September 2020 and is expected to be completed in January 2021. Afterwards, the project will be handed over to the Ramtha

	Municipality. Water saved for FY20 accounted for 19,303.6 m^3 and yearly water savings are expected to account for 75,000 m^3.
Al Ghadeer Al Abiad Dam- Mafraq	The Environmental Mitigation and Monitoring Plans (EMMPs) have been finalized and were submitted to USAID. Upon receiving approval of the EMMP, WIT moved to the design phase. During the reporting quarter, designs were finalized and sent to USAID for approval. Upon approval, the construction work is expected to begin in Q3 FY21. Water savings after the dam has been filled are anticipated to be 50,000 m^3 of water per year.
Al Azraq Management Aquifer Recharge (MAR project)- Zarqa	The initial study has been submitted to USAID. Upon approval, WIT will move to the design phase. The interventions will include removing sediments, installing needed safety measures. Initial annual water-savings after the 2 MARs have been filled are anticipated to range between 100,000-120,000 m^3.
King Abdullah Canal and Sharhabil bin Hasna Dam	WIT´s intervention to save water in Ziglab Dam includes building a pipeline between KAC and Ziglab Dam and pumping an estimated 1 MCM of water per year from KAC to Ziglab Dam during the winter season. The scope of work was submitted to USAID and approved during the reporting period. WIT has moved to tendering the initial study and EMMP. It has been agreed that JVA will be responsible for the implementation and supervision of the project both financially and technically and determining the specifications for the needed equipment. WIT will assist by supplying water pumps with electrical panels, pipelines, pump bases and an operating panel system.

Al-Buwadia retention structure in Ramtha.

Deir Al Kahef retention structure in Mafraq.

WSTs intervention at schools

By the end of December 2020, RSS completed the installation of WSTs in five schools in Ajloun and Jerash. This intervention included the construction of a RWH system with a capacity of 70 m³ for each school, in addition to the installation of two GWSs connected to the drip irrigation system at Al Hashmia for Boys and Anjarah Elementary Mixed School. The delay in completing these projects included leakages of the RWH tanks in two schools (Anjara for Boys and Anjara for Girls) during the water test as well as closures due to election days and the lockdowns. RSS is now working on the handover to the MoE which will be completed by the end of January 2021.

Rainwater harvesting system installed in a school in Ajloun.

Based on the need for a lasting positive change to inspire future generations to engage in water conservation and good practices in Jordan, WIT is targeting 25 schools across Amman, Irbid, Ajloun, Jerash, Azraq and Mafraq through the installation of WST in the schools and raising awareness about water issues. During November 2020, RSS carried out in-depth technical assessment for each targeted school to enable RSS engineering team in understanding the current water-related situation at each school. The technical assessments also supported the decision on the type of interventions in each school, the appropriate technologies that meet the school's needs, the size and capacity for the different systems, the required maintenance, and overall will help RSS in developing the BOQ (Bill of Quantities) and specifications. In January, RSS will begin the tendering process for the first 15 schools, upon USAID approval.

Gender: Practice and Learning

Gender-Intentional Access to Finance for Water Saving Technologies

During the first quarter, 152 people- 36% being female- took loans for household water saving devices for a total of $175,805 USD (124,470 JD). On upcoming training opportunities, WIT will continue to follow up closely with CBOs and loan recipients to ensure that messages around gender are consistent and clear.

Girls' and Women's Leadership on Demand and Supply-Side

Women and girls continue to drive water-saving activities on the demand and supply side. Solvillion, a woman-owned grey water system supplier exceeded the set sales targets by selling 40 systems that will be installed in schools, universities, mosques and households. 17 out of 40 sold systems have been installed and the rest will be installed during FY21. The actual total amount of water saved from the 23 installed systems was 4,011 m³ in the last quarter.

Additionally, Solvillion employed an inclusive, community-based approach to build awareness of their systems by working with imams and other community leaders. Solvillion also ran business competitions targeting university students and recent graduates; participants were challenged to design multimedia and social media strategies for the company. In total, 90 students participated in the challenges, over 50% of whom were young women. The winners' content was used on the suppliers' channels, and winners also received advanced training and sales agent contracts from Solvillion.

Communications

Building Farmer's Knowledge to Improve Efficient Irrigation in Azraq and Mafraq

The USAID Water Innovation Technologies Project (WIT) helps farmers in two groundwater-dependent agricultural areas (Azraq and Mafraq) to save water resources and cut down on electricity bills by introducing water-efficient technologies and practices. The project links farmers to the private sector, specifically the suppliers of water-saving technologies and service providers to increase irrigation efficiency by alleviating constraints on access to water-saving technologies. However, many farmers in Jordan lack information and advice on how to optimize irrigation systems, the availability of new irrigation technologies, and the costs and benefits of adopting improved water-saving practices and technologies in their farms. To address the knowledge related-barriers, WIT has adopted a multi-pronged approach to increase farmers' access to relevant irrigation-related advice from a variety of different market actors. During this quarter, WIT finalized factsheets about water requirements for crops in Mafraq and Azraq, and developed three educational videos to farmers covering technical topics such as irrigation network design, benefits of using low-flow emitters associated with proper filtration systems, irrigation system management and scheduling. In 2021, the project will continue to work with a diverse array of supporting market actors including input providers and wholesale agents, media outlets and government agencies to raise awareness of farmers to positively change and influence their behavior to adopt efficient irrigation practices and technologies.

Art for Water Conservation Initiative

Building on WIT's street art initiative "Hold Water" in North of Jordan, the project is collaborating with Jordan Water Co Miyahuna to create six murals on the company's reservoirs in Amman. This activity aims to spark conversation on water scarcity and raise the awareness of Amman households on the water problem and the available water-saving practices and technologies. During this quarter, the project completed the selection of six reservoirs and four artists to create the murals. To prepare for the sketches of the murals, the project conducted six workshops with the participation of 90 community members to identify water saving messages and visual designs to inspire the artists. As a result of this exercise, the project and Miyahuna were able to shortlist 12 messages which will be turned into sketches. Moreover, the project conducted a procurement process to hire a company

to clean Al Rasheed and Um Uthaina reservoirs/towers from dust to ensure durability and quality of the murals.

Launching a Study on Media Coverage of Water Conservation Issues in Jordan

Media market assessment study.

Although Jordan has a wide variety of traditional and modern mass media outlets, the quantity and quality of media coverage of water issues is limited and usually does not provide solutions, but only describes the problems. The USAID Water Innovation Technologies (WIT) project works to promote public understanding of water conservation issues and solutions. The project recognizes the vital role of media in disseminating information and building public awareness on the importance of water as a critical resource, its rational use, and affordable water conservation behaviors, products and irrigation systems. In partnership with Center of Defending Freedom of Journalists, WIT launched a pilot study entitled "Jordanian Media Reality in Covering Water Issues and Challenges" to identify the constraints which restrain media outlets from delivering quality messaging around household and farm-level solutions to the water shortages. The study was launched in December 2020 through a virtual event with the participation of Media and Communication Secretary-General Assistant at the Ministry of Water and Irrigation, water experts, environmental journalists and other sector actors.

The study uses multiple research tools to assess the connections between Jordan's water situation and the media and will provide key indicators to strengthen the connections. Moreover, it offers recommendations that focus on building the capacities of the current and new generations of specialized water journalists to pave the way for increased investigative journalism in Jordan. In addition, the study advocates for developing media policies in support of the water sector in press institutions, launching a media observatory for water issues and supporting the official institutions working in the water sector with communication and media plans.

WIT will use the information gleaned from the study's findings to design and deliver a customized training program for new and existing water journalists, water experts, weather forecasters, social media influencers, meteorological experts as well as media workers in different water institutions. These trained participants can improve the quality and accuracy of reporting on water conservation issues and increase the amount of media coverage of the important water issues. These efforts will drive positive, long-term momentum for improved water efficiency by building public knowledge and driving behavior change to conserve water.

Launching Water Conservation Awareness Campaign on World Water Day 2021

As Jordan continues to navigate its way through the unprecedented times of the Covid-19 pandemic, households' water consumption patterns have increased significantly. Aligned with the project's awareness objectives, the annual World Water Day on March 22, 2021 is an opportunity to remind people about the significance of water and to promote sustainability for this scarce resource by delivering targeted and accurate water conservation messages to households. To mark this occasion, and to address the above-mentioned knowledge gap and build households' consideration to use water efficiently in these challenging times, USAID WIT and Jordan Water Company (Miyahuna), the main water utility serving Amman, aim to launch social media campaign on to increase the adoption of water-saving technologies. To achieve this objective, the campaign will leverage on the success of last year's water awareness campaign "Do Not Underestimate the Dot/Drop" to empower people with knowledge and solutions to inspire them to use water efficiently. This campaign will remind households in Jordan, specifically in Amman", that the water issue in Jordan is not over yet and will continue to raise the awareness of people about the available solutions to conserve water by promoting the benefits of water-saving practices and devices.

During this quarter, the project worked on two new creative directions and provided 360 options for the named water conservation campaign. Moreover, to amplify the reach of the campaign messages to Miyahuna's subscribers, the project developed a mass flyer to be distributed with the water bill and a microsite to provide households with a full list of water-saving practices and specs for water-saving technologies to help them make informed purchase decisions. Link to microsite: http://ogilvy-dev.com/miyahuna8/

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exercise, the project and Miyahuna were able to shortlist 12 messages which will be turned into sketches. Moreover, the project conducted a procurement process to hire a company to clean Al Rasheed and Um Uthaina reservoirs/towers from dust to ensure durability and quality of the murals.

Educating Children on Water Saving Practices and Technologies

Drama is one of the best tools for increasing knowledge of children and adolescents and increasing their participation and contribution for issues. To achieve long behavioral change, the project is capitalizing on the long experience of Haya Cultural Center in drama and theatre to raise the awareness of children and their families on water conservation through puppet theatre. As part of this collaboration, HCC will hold puppet shows to disseminate information among children to garner their attention in an interactive and fun way on the issue of water conservation, and children in such theatre can participate and provide solutions for the issues raised. The puppet shows are followed by interactive paper games and discussions, in addition to a unique experience through an educational sculpture.

During this reporting period, the project held three focus groups which were attended by teachers, parents and community members to test the relevance of the play messages. Additionally, HCC have selected the play director and actors are currently in the process of finalizing the play scenario, design of the sculpture and the procurement of the giveaways.

Collaboration, Learning, and Adaptation (CLA)

During the reporting quarter, WIT completed two assessments. The first assessment, under the household component entitled "Estimation of evaporation from open water surfaces in the North and Middle governorates in Jordan and potential technology interventions" aims at understanding the trends of evaporation to inform decision makers about potential technical solutions that can reduce evaporation from man-made reservoirs and provide more water for the community. The report included; 1) an estimation of evaporation from open water surfaces in North and Middle governorates in Jordan with the use of WaPOR remotely sensed data; 2) evaporation reduction methodologies including a review of popular methodologies that are used worldwide to control evaporation from open water surfaces, and websites of international providers of these technologies and a rapid market scan of technologies available in Jordan and local providers; and a 3) cost-savings analysis of different technologies, with a case study on one of the WIT communal projects and the methodology which can be used as an example for rapid cost-savings analysis and can be applied for other reservoirs or communal projects (See Annex 2).

The second assessment is the "Agricultural market trends analysis report which aims to capture the changes in market trends within the agriculture water-saving technologies sector as a result of the facilitation/interventions introduced since 2018 by WIT. The report introduces two levels of assessments (1) intervention lens which investigated and tracked changes triggered by/or attributed to WIT's interventions and the (2) helicopter lens which

focused on the higher changes in the market and supporting functions, by capturing the WST market changes and identifying gaps and opportunities. This report will continue to support WIT in adapting its strategies and interventions to address identified gaps within the residual time of the WIT project and the 2021-2022 priorities and plans (See Annex 3).

Monitoring and Evaluation/ WIT Quarter Indicators and Achievements

#	Performance Indicator	Target FY21	Achieved Q1 FY21	LOP Target	LOP Achieved
FY21 Q1 Quarterly Indicators					
7	Number of market actors that offer new technologies, products or services (custom)	10	15	40	49
8	Number of formal partnerships established among private sector, civil society, or government actors (custom)	10	2	65	69
10	Number of farmers that receive advisory services	25	24	250	262
13	Number of people educated on tools, approaches, and/or methods of water security, integrated water resource management and/or water source protection as a result of USG assistance	4,680	742	14,950	15,400
14	Percentage of female participants in USG- assisted programs to increase access to productive economic resource (GNDER-2) (F indicator 4.3.b)	10%	28%	10%	20%
15	Number of USG- supported community meetings and educational events that expand social dialogue on gender equality (Mission indicator 4.1.b)	20	0	70	291

Indicator 7: Number of market actors that offer new technologies, products or services

(Target FY21: 10 – Achieved Q1 FY 21: 15)

During this quarter different market actors improved their outreach and diversity of new technologies across various areas. Moreover, Al-Aman Company signed 15 agreements with different market actors to expand the distribution of their WSDs in Amman and Northern governorates (across five CBOs and ten retailers).

Indicator 8: Number of formal partnerships established among private sector, civil society or government actors

(Target FY21: 10 – Achieved Q1 FY21: 2)

During this quarter, WIT signed two new agreements, one with a new market actor, UNIVERSAL Drip Irrigation Pipe Manufacturing. UNIVERSAL will offer improved field-based technical services to farmers, and irrigation system design providing farmers installing or improving their systems with a custom irrigation system design. Additionally, WIT renewed two sub-award agreements with two CBOs in Ajloun (Al-Zaytoona and Um Al-Lulu).

Indicator 10: Number of farmers that receive advisory services

(Target FY21: 25 – Achieved Q1 FY 21: 14)

During FY21 Q1, INWRDAM held a behavioral change workshop in Azraq for the WISE project (Water Innovation for Sustainable Economy) at Mr. Karam Tarabieh Farm, which is the WISE pilot farm in Azraq. The main objectives of the workshop were to teach and explain the correct and sustainable use of the WISE application technology for farmers, local stakeholders and local agronomists. The workshop included 14 participants which saw the new irrigation technology which will enable them to manage their irrigation system through the mobile application that connects with the installed weather stations to provide real-time weather data. Moreover, Tadsheen conducted an advisory session in three farms in Mafraq & Azraq. The training targeted farmers and their employees, and MIRA staff on the proper usage of the automation irrigation system.

Indicator 13: Number of people educated on tools, approaches, and/or methods for water security, integrated water resource management, and/or water source protection as a result of USG assistance (M-PMP 3.3.2.1.a) (F HL.8.3-1)

(FY21 Target: 4,680 – Achieved Q1 FY21:742)

During this quarter, WIT enhanced suppliers' pre- and post-sales services by supporting them with various marketing tools, such as irrigation system design software, as one of the result-based package components. WIT provided engaged suppliers with a copy of an advanced irrigation system design software (IrriCAD) to provide farmers with a custom irrigation system design. Suppliers will provide farmers with a quality system design that takes minimal time and effort. Additionally, the CBOs in Irbid conducted awareness sessions to local communities targeting 732 people (192 men and 540 women) on the water situation in Jordan and WST.

Indicator 14: Percentage of female participants in USG-assisted programs designed to increase access to productive economic resource (GNDR-2)

(Target FY21: 10% - Achieved Q1 FY 21: 28%)

WIT has continued its efforts in overcoming the affordability constraint in both household (HH) and agriculture (AG) sectors. For HH, the team conducted follow up sessions with partnered CBOs during the reporting period which led to a better understanding of the revolving loan system. Within the agriculture component, WIT continues to work with ACC in utilizing ACC's existing channels to raise awareness about WST. ACC have been using their own capital to disburse water-saving loans while working on a loan product to support the adoption of WST. During Q1 FY21 WIT worked on the preparation of a series of financial training sessions which will enhance the financial knowledge of targeted farmers.

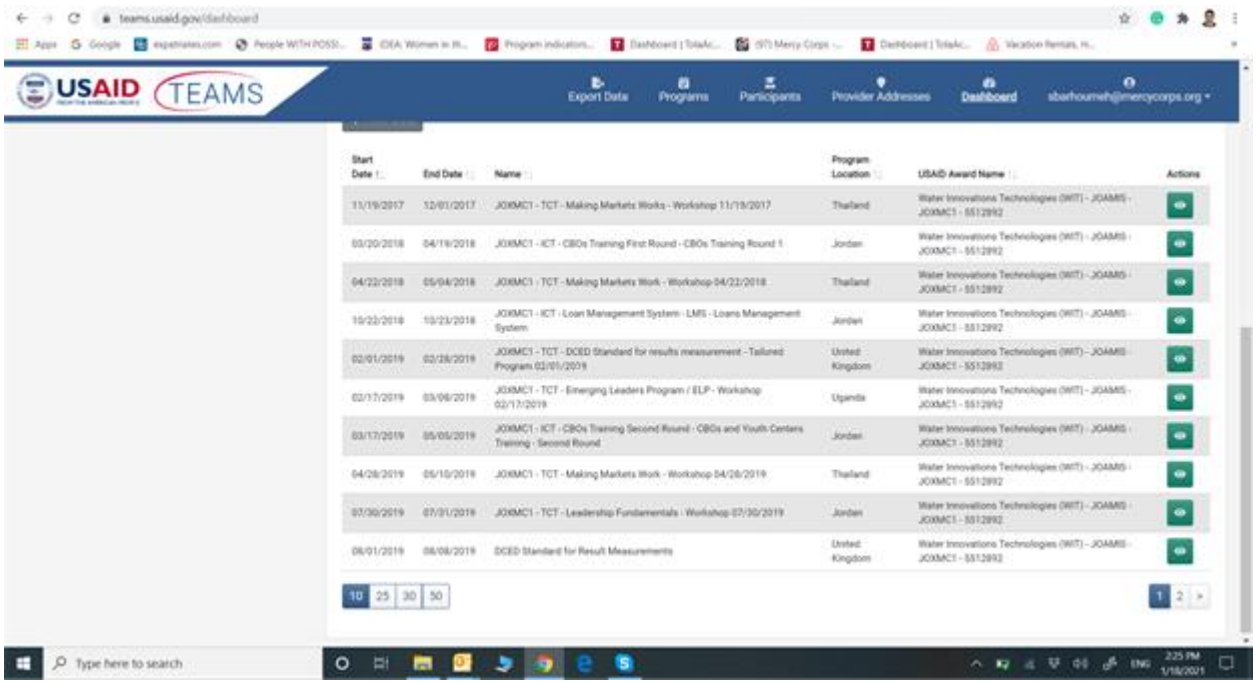
Indicator 15: Number of USG-supported community meetings and educational events that expand social dialogue on gender equality (M-PMP 4.1b)

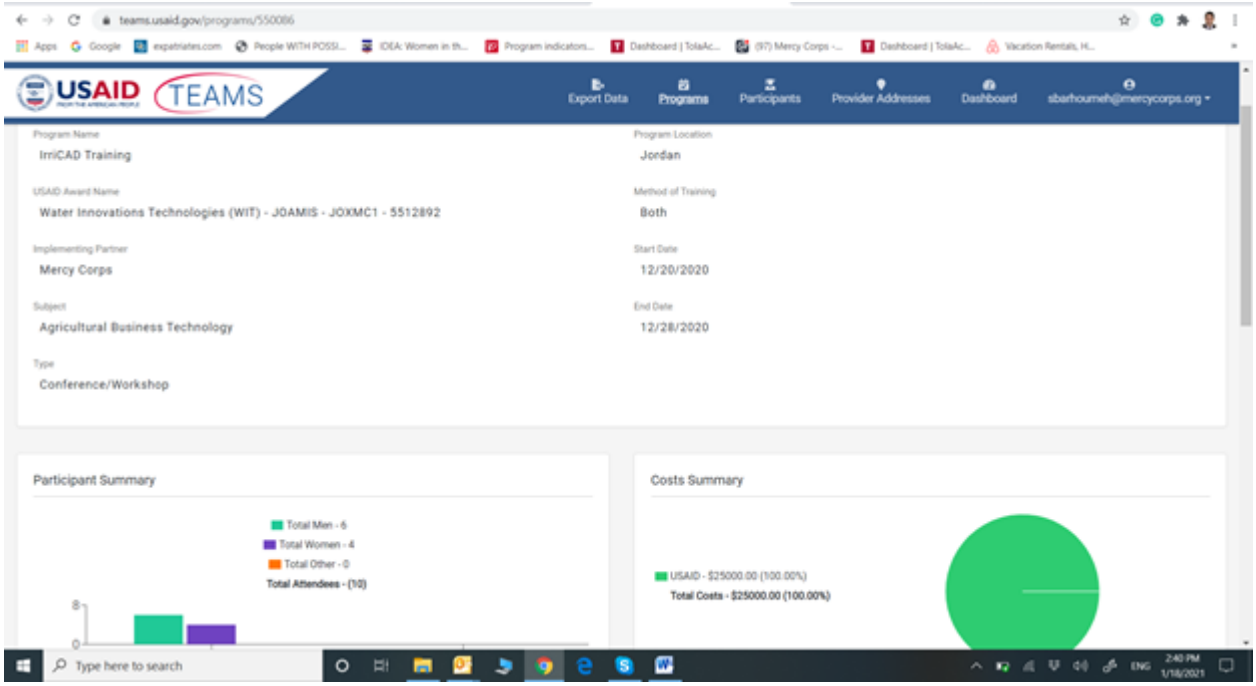
(Target FY21: 20 – Achieved Q1 FY 21: 0)

Due to COVID-19 and associated movement restrictions during this quarter, CBOs and YCs awareness sessions were adapted to be done remotely. The gender session was not presented to reduce the length of the video to three minutes to discuss water saving methods.

TEAMS

WIT updates the USAID Training & Exchanging Automated Management System (TEAMS) on a quarterly basis. For the reporting quarter, information was uploaded on the IrriCAD software training.





Geographic Date Reporting (Agriculture and Households)

Below is a list of all the activities and locations that the WIT project has pursued during the reporting period.

Agriculture

No.	Governorate	Farmer Name	Intervention	GPS Coordinates
1	Al-Azraq	Abdel Kareem Fayyad Zyoud	Demo site and Investment Fund	31.844851 36.931543
2		Abdalla Yaghi	Investment Fund	31.811427 37.811427
3		Abdallah Hattab	Investment Fund	31.889393 36.857495
4		Abdul Rahman Salameh	Investment Fund	31.8512282 36.9900056
5		Adel Qentar	Investment Fund/Early Adopter	31.880735 36.861150
6		Ahmad Safadi	Demo site and Investment Fund	31.857456 36.987869
7		Ahmad Suhaim	Investment Fund	31.85861111 36.97083333
8		Akef Al Mohareb	Investment Fund	31.877677 37.0252400
9		Al-Barakeh farms	Investment Fund	31.8365760 36.9226510 31.86806 36.0259430 31.833907 36.9278630
10		Al Soudi farm	Investment Fund	31.864683 37.012003
11		Ali Hasan Arafat	Investment Fund	31.8533710 36.8224320
12		Ali Salameh Sarhan	Investment Fund	31.8515088 36.9926147
13		Ayed Al Mohareb	Investment Fund	31.8755250 37.0266220

14		Bateekha farm	Investment Fund	31.8819 36.8561
15		Faris Al Akiely	Demo site	31.80542 37.00719
16		Ibrahim Hamoudeh	Investment Fund	31.8756640 37.0230350
17		Loai Sultan	Investment Fund	31.887076 36.860534
18		Mahmoud and Abdalla Yaghi	Investment Fund	31.812568 37.071589
19		Mahmoud Yaghi	Investment Fund	31.812592 37.071729
20		Mohammad Al Zghiyer	Early Adopter	32.4899500 35.9512790
21		Mahmoud Hamoudeh	Investment Fund	31.8746210 37.0240390
22		Moayad Khail Rodwan	Investment Fund	31.9006 36.8593
23		Mohammad Khataibeh	Investment Fund	31.8951220 36.8617360
24		Mohammad Sawalmeh	Investment Fund	31.848426, 36.957299
25		Mohannad Safadi + Hazem and Mohammad Khataibeh	Investment Fund	31.894623 36.876560
26		Msameh Al Arabeed	Investment Fund	31.801179 37.015617
27		Nader Al Mohareb	Investment Fund	31.8774770 37.0248730
28		Rakan Muhareb	Investment Fund	31.870696 37.019650
29		Salameh Sarhan	Investment Fund	31.898341 36.965681
30		Tayseer Al Mohareb	Investment Fund	31.8766840 37.0226830
31		Yaseer Al Mohareb	Investment Fund	31.875454 37.0263860
32		Yosri Al-Jazi	Investment Fund	31.894530 36.990168
33		Zaid Daradkeh	Investment Fund	31.812159

				37.051136
34	Al-Mafraq	Abdallah Al Zaben	Investment Fund	32.20377 36.30470
35		Abdallah Sarhan	Investment Fund	32.5069333 36.174467
36		Abdallah Sawalmeh	Investment Fund	32.230000 36.738055
37		Ahmad Msallam Sheraa	Investment Fund	32.2344 36.7204
38		Ala'a Al Soboh	Demo Site	32.250001 36.624526
39		Atieh Al Hamaydeh	Investment Fund	32.2408901 36.7256288
40		Ayman Abu Keshek	Demo Site, Early Adopter and Investment Fund	32.314247 36.392448
41		Abdul Rahman Fandi	Investment Fund	32.471021 36.136436
42		Basheer Ghazzawi	Demo Site (removed)	32.467656 36.149945
43		Eid Hamayde	Early Adopter	32.232636 36.615282
44		Emad Al-Alyan	Investment Fund	32.309444 36.423611
45		Fadel Al-Mugherbi	Demo Site, Early Adopter and Investment Fund	32.221529 36.264839
46		Hasan Alwerr	Investment Fund	32.237174 36.214947
47		Hasan Salem	Demo Site (removed)	32.170880 36.687324
48		Islamil and Bassam Hamayde	Demo Site, Early Adopter and Investment Fund	32.3337100 36.5416280
49		Issa Alwerr	Investment Fund	32.235869 36.214499
50		Jihad Shalaldeh	Investment Fund	32.425278 36.211944
51		Khaled Hamdan	Investment Fund	32.421685 36.3404067

52		Moayyad Al Hamaydeh	Investment Fund	32.2330655 36.6134801
53		Mohammad Taleb Abu Eleem	Investment Fund	32.2911 35.9828
54		Mousa Al hamayde	Investment Fund	32.2347333 36.4870833
55		Muneer Hamdan	Investment Fund	32.421708 36.340941
56		Mohannad Badaweye	Investment Fund	32.258927 36.6088530
57		Riad Daghbouseh	Investment Fund	32.307035 36.393898
58		Saleh Hamayde	Investment Fund	32.231108 36.61559525
59		Salem Al Roumi	Investment Fund (reinstalled 40 dunums)	32.200972 36.331778
60		Sami Al Hamayde	Investment Fund	32.2344 36.7207
61		Shwekeni	Investment Fund	32.247 36.313
62		Sultan Aljamarah	Demo site and Investment Fund	32.329444 36.337778
63		Sobhi Hamaideh	Investment Fund	32.272108 36.701981
64		Saleh mohammad Ibdah	Investment Fund	32.471644 36.134766
65		Sami Rahhal	Investment Fund	32.145762 36.371346
66		Tareq Al Weer	Demo Site, Early Adopter and Investment Fund	32.23072 36.21782
67		Wajeeh Al Hamayde	Early Adopter and Investment Fund	32.2441670 36.6176670
68		Yehya Al Mugherbi	Investment Fund	32.354166 36.45166
69		Zumot Group	Early Adopter and Investment Fund	32.28578 36.13555
70	Amman	Ali Abu Marzouq	Investment Fund	31.806111 34.955556

71		Mutaz Al-Yamani	Investment Fund	31.764444 35.927778
72		Maher Abu Rustum	Investment Fund	31.805556 35.961944
73	Madaba	Maqboul Al-Bean	Investment Fund	31.768056 35.937778
74	Ramtha	Mahmoud Nayef	Early Adopter	32.4897222 35.951111

Households & Communities

No.	Governorate	Institution	Location
Al Amman- WSD and WS Toilets (demonstration sites)			
1	Ajloun	Ajloun Hotel	32.3297 35.7344
2		Qemmet Al Yasmeen Restaurant	32.20530 35.48424
3	Irbid	7 Days Hotel	32.5382 35.8516
4		Irbid Mall	32.5568 35.8469
5		Irbid National University	32.4063 35.9503
6		Jaradar University	32.4224 35.9468
7		Rosary Sisters Hospital	32.31299 35.52055
8	Mafraq	Al-Fakher Hotel Apartments	32.2012.0 36.11550
9		Al-Joud Schools for Creativity and Excellence	32.19586 36.10093
10		Rawabi Al-Mafraq Restaurant	32.203440 36.122894
11	Amman	Dar al dawa development investment co jordan	31°58'21.1"N 35°53'03.5"E
12		Al-Khwarizmi Technical University College	31°59'42.2"N 35°51'34.7"E

Solvillion- GWS (demonstration sites)			
1	Ajloun	Riyadh Al-Saleheen Mosque	32.18117 35.45405
2	Amman	Sultan Al-Baddad Mosque	32.03295 35.48461
3	Irbid	Salah Al-Dein Al-Ayoubi Mosque	32.28364 35.54184
4	Jerash	Al-Hashmi Mosque	32.16436 35.53371
5		Ammar Bin Yaser Mosque	32.13462 35.50430
6	Al-Mafraq	Raya Bint Al-Hisein School for girls	32.2034 36.1215
Al-Aman market network- List of retailers			
1	Irbid	Edon CBO	32°30'29.5"N 35°51'28.5"E
2		Al-Smadi for building materials shop	32°31'35.9"N 35°51'14.9"E
3		Tawfeeq Al-Khalel for building materials shop	32°31'49.2"N 35°51'09.6"E
4		Al-oun for building materials shop	32°31'44.0"N 35°51'11.6"E
5		Tahfeez CBO	32.53418 35.84406
6		Kinanah CBO for women	32.3935 35.49545
7	Ajloun	Al-Wesam for electronic and building materials shop	32°32'06.7"N 35°50'47.7"E
8		Al-Tawfeeq for building materials shop	32°22'27.1"N 35°50'07.7"E
9		Fatima Al-Zahra'a CBO	32°20'02.0"N 35°45'45.4"E
10	Mafraq	Aamalkom for logistic services	32°02'69.521"N 36°05'27327"E
11		Naser Al-Zaghal for building materials shop	32°20'33.8"N 36°12'37.1"E
12		Moltaqa Al-Amal	NA
13		Ayadi Al-Badeia CBO	32.28856

			36.65593
14	Amman	Bareeq Alzomorrod for building materials shop	31°5947.6"N 35°51'02.0"E
15		Bata for building materials shop	31°5923.0"N 35°50'57.7"E

No	Governorate	Intervention		GPS Coordinates
Communal/Construction Projects				
1	Ajloun	Queen Rania Pond– Sakhra pond		32.3645556 35.8057222
2	Al-Azraq	Al-Azraq MARs Project		31.880905 36.830799
3	Irbid	Bowiedah Rainwater Collection– Ramtha		32.4624722 36.0483333
4	Al-Mafraq	Dier Al-Kahef Rainwater Collection– Dier Al-Kahef		32.2825278 36.8391111
5	Al-Salt	KAC- Ziglab Rainwater Collection		32.524280 35.623550
Communal Initiatives for Water Saving (CIWS)				
1	Irbid	Tahfees CBO	Installation of GWS	32.32029 35.50388
2	Jerash	Sakeb Elementary School for Boys	Installation of RWH System	32.16500 35.48330
Communal/Construction Projects- Schools				
1	Ajloun	Al-Hashmia for Boys	RWH System (70 m^3), and drip irrigation GW network	32.2139 35.4027
2		Al-Hashmia for Girls	RWH System (70 m^3)	32.2159 35.4010
3		Anjarah Elementary Mixed School	RWH System (70 m^3), and drip irrigation GW network	32.1840 35.4519
4		Anjarah School for	RWH System (70 m^3)	32.1840

		Boys		35.4519
5		Alzobair Ben Alawwam School (KG)	RWH System (70 m³)	32.2218 35.5014
6		Sakeb Secondary School for Boys	RWH System (60 m³)	32.16520 35.48183
7	Irbid	Iben Hazem Elementary School for Boys	RWH System (100 m³) and GW drip irrigation network	32.33279 36.00052
8		Omrawa Secondary School for Boys	RWH Tank (100 m³), and GW drip irrigation network	32.40592 35.56104
9		Samma Secondary School	RWH System (100 m³)	32.34192 35.41081
10		Samou' Elementary School for Girls	RWH System (120 m³)	32.30531 35.44280
11	Jerash	Dier Al-layat elementary school for boys	RWH System (100 m³)	32.17397 35.52384
RSS Demonstration Sites				
1	Ajloun	Decentralized Wastewater System		32.3830556 35.8075277
2		Dry sanitation units		32.3774167 35.7639166
3	Al-Mafraq	Greywater System at the CBO		32.34525 36.19225
4		Greywater System at the house		32.1989444 36.3080555
5		Dry sanitation units		32.3452778 36.1921111

Community Based Organizations and Youth Centers					
No.	Gov.	Name	Awareness Sessions	Revolving Loan	GPS

1	Ajloun	Al-Baaj Cooperative	X		32.20175 35.45056
2		Ajloun Women Center	X		32.32455 35.75179
3		Al-Zaytuna Cooperative multipurpose Society	X	X	32.17509 35.42128
4		Fatimah Al-Zahra'a Cooperative Multipurpose Society	X	X	32.33485 35.76673
5		Kufranjah Women Charitable Society	X	X	32.29991 35.70518
6		Salah Al-Din charity association for the care of People with Disabilities and Orphans	X	X	32.28364 35.54184
7		Um Lulu for Women Cooperative Multipurpose Society	X	X	32.37255 35.83880
8	Azraq	El-Orfan Charity Society	X	X	31.88062 36.83423
9		Nashmyat Al-badia Alsharqiya Cooperative Society for Women	X	X	31.88062 36.83423
10	Irbid	Alwostiyah Voluntary Society for Student Patronization	X	X	32.34126 35.44225
11		Al-Mazar Youth Association for Voluntary Work	X	X	32.47045 35.79735
12		Al-Ramtha Women Center	X		32.55907 36.00966
13		Al-Shuna Women Center	X		32.62602 35.61733
14		Amrawah Association for Social Development	X	X	32.41092 35.56028
15		Dair Abi Saeed Charitable Cooperative	X		32.50481 35.68406
16		Hartha Cooperative	X		32.41337 35.50326
17		Houfa Cooperative	X		32.57124 35.71000
18		Idoun Charity	X	X	32.50802

					35.85807
19		Irbid Youth Center	X		32.34171 35.52228
20		Kinanah Charity Society	X	X	32.3935 35.49545
21		Kitem charity	X	X	32.44140 35.89532
22		Rawabet Al Salam Charitable Cooperative	X		32.54531 35.85806
23		Rehaba Charitable Society	X	X	32.41972 35.80999
24		Tahfeez Society for Leadership and development	X	X	32.53418 35.84406
25		Tebnah Charity Association	X	X	32.47603 35.72961
26	Jerash	Al-Khair Mana charitable cooperative	X		32.27689 35.89556
27		Darb Alsefsaf cooperative	X		32.17128 35.48294
28		Ihsan Souf charitable cooperative	X		32.31556 35.831562
29		Jerash women center	X		32.279183 35.895046
30		Kufr Khal youth center	X		32.35931 35.88781
31		Mersal Charity Society	X	X	32.29256 35.90868
32		Sama Al-Alia charitable cooperative	X		32.28035 35.89518
33		Shabat Al-mostaqbal charitable cooperative	X		32.16127 35.49261
34		Souf charitable cooperative	X		32.31161 35.83936

35	Al-Mafraq	Ayadi Al-Badyeh Cooperative Multipurpose Society	X	X	32.28856 36.65593
36		Abaq Al-Sahraa Cooperative Multipurpose Society	X	X	32.47234 36.23628
37		Good Land Charity Society	X	X	32.34530 36.19231
38		Deir Al-Kahef Society for Social Development	X	X	32.27847 36.83670
39		Najm Albadeyeh Cooperative	X		32.19187 36.30149
40	Amman	Pioneer plumbing	X		32.00806 35.88250
41		Retired military personnel-Mowaqqar brigade	X		32.00806 35.88250
42		Al-Sohba Al-Tayyba	X		31.66537 35.88519
43		Retired military personnel-University brigade	X		32.01451 35.88125
44		Al Wehdat Charitable Society	X		31.92968 35.93658
45		Juwaida Charitable Society	X		31.92520 35.91974
46		Abu Alanda Association for Social Development	X		32.01450 35.88122
47		Al-Ara'ek Charitable Society	X		31.92991 35.90220
48		Umm Batma for social development	X		31.82286 36.06748
49		Friends of Cancer Patients Association	X		31.95863 35.90389
50		Khashafia Dabiba Charity Association	X		31.95863 35.90389

WATER INNOVATION TECHNOLOGIES PROJECT

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